

'BETTING ON THE COME'--THE PEOPLE'S LIBERATION ARMY COMBINED ARMS GAMBLE FOR THE 21ST CENTURY

A MONOGRAPH

BY

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ABSTRACT

'BETTING ON THE COME' - THE PEOPLE'S LIBERATION ARMY'S COMBINED ARMS GAMBLE FOR THE 21ST CENTURY by Major M.L. Hendricks, USA, 55 pages.

China's growing military capabilities serve its ambition to become the greatest power in Asia. Correspondingly, the PLA continues to modernize its forces. Established American economic and military relationships in Asia dictate national strategies of either engagement or containment of Chinese influence. A potential for Sino - American conflict exists.

The monograph defines China's current security environment from engagement and containment perspectives. Recent assessments of the PLA's growing force projection capabilities are reviewed to provide the background for an examination of the PLA's combined arms capabilities. The monograph illustrates the PLA's attempts to modernize its force through improvements in combined arms capabilities.

Using the 1979 Sino - Vietnamese Conflict as a measurement of combat effectiveness, the PLA initiated doctrinal, organizational, educational and training reforms with varying degrees of success. The monograph discusses each of these four areas and determines that major impediments to the PLA's modernization are competing doctrinal requirements, austere defense budgets and continued political reliance on the primacy of a "people's war." Unwilling and incapable of rapidly modernizing the entire force, the PLA believes that it can continue to leverage non-equipment aspects of modernization to overcome technological shortfalls and military incompetence. The monograph concludes by acknowledging improvements in PLA combined arms capabilities, but indicates that the Chinese remain well behind the U.S. in achieving military superpower status.

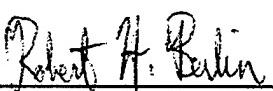
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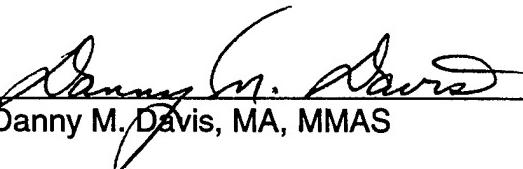
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Introduction

The 1996 Department of Defense (DOD) Quadrennial Review provides a key assessment of the future global security environment. Assuming that the United States will maintain military superiority over current and potential rivals, the review asserts that there will be no global peer competitor capable of challenging the United States militarily for the next ten to fifteen years. Further, the United States is expected to remain the world's only superpower until 2015. However, beyond 2015, "...there is the possibility that a regional great power or global peer competitor may emerge."¹ DOD identified China as one of those regional great powers.

The QDR is speculative, yet it reflects post Cold War realities. The demise of the Soviet Union provided a catalyst for Chinese military and economic change. China no longer considered the Soviets as a major external military threat and Soviet economic and military influence in the region waned. China took advantage of the changing economic and security environments quickly became an economic force in the region.² The end of the Cold War also fundamentally altered the U.S. - Sino security relationship. China lost its relevance as a strategic counterbalance to help contain Soviet military power and influence in Southeast Asia. The post Cold War security environment has provided China with a benign security environment, burgeoning economic opportunities and a growing influence in the Asian region.

The U.S. has strong economic interests in the Asian region and the political will to maintain them. The current national security strategy illustrates that the U.S. seeks to maintain peace and stability in the Asian region by promoting democracy, market

economies, and enhanced cooperation among nations.³ The Strategy also identifies the crucial role that U.S. military forces fulfill in maintaining a military balance of power in Asia. Maintaining the military balance manifests itself primarily in security arrangements.⁴ In retrospect, American security arrangements in Asia were designed to contain the Soviet Union and China. Today, these security arrangements function to maintain American economic and military dominance in the region. Interestingly, the stable political environment created by American security arrangements in the Asian region provided China with the opportunity to develop its economic potential. China's economic potential is great enough to qualify as America's future competitor. As the QDR assumes, it is the established American economic interests and military / security arrangements in the Asia region that increase the potential of U.S. - Sino conflict. Moreover, China has begun to assert itself.⁵

Engagement or containment are the two broad strategies for protecting American strategic interests in Asia. Historically, U.S. policy reflected both of those strategies. During World War II, American arms and support to China helped defeat the Japanese. With the establishment of the People's Republic Of China in 1949, the U.S. sought to contain Chinese communism in Asia and in third world countries. In 1972, President Richard M. Nixon engaged the Chinese to help contain the Soviet Union. U.S. - Sino rapprochement lasted through the 1980s until the Soviet Union collapsed and the Chinese crushed the 1989 pro-democracy movement. Since 1989, the U.S. has sought to engage China economically and contain China militarily.⁶ The

debate remains viable today and focuses on influencing the U.S. - Sino security environment.

Andrew Nathan, a political scientist at Columbia University, and Robert S. Ross, a political scientist at Boston College, are proponents for an engagement strategy. In The Great Wall And The Empty Fortress, they argue that China remains a vulnerable power in a regional security environment in which China is at a distinct disadvantage. The authors acknowledge that China's foreign policy goals are to reclaim lost territories (including Taiwan), prevent economic and military domination of the Asian region (maintain multipolarity) and to create favorable environments for economic growth.⁷ However, they contend that China is unlikely to use military force to achieve their goals because China's military is technologically, informationally and organizationally inferior to other regional military forces. China's limited ability to seize, exploit or defend economic and territorial interests and its inability to militarily challenge the U.S. and its allies in the region lead the authors to suggest that China will continue to focus on economic growth. Economic growth requires regional peace and stability and precludes detrimental conditions which impact on the security environment. While Nathan and Ross believe that there should be no reduction in the U.S. lead military balance in the region, they maintain that China is still too weak to justify an American shift from engagement towards containment.⁸

Richard Bernstein and Ross H. Munro, journalists and former Time bureau chiefs in Asia, believe that China's record of military intervention in border conflicts, assertions of sovereignty over Taiwan and the Spratly Islands, and a

willingness to export arms and Weapons of Mass Destruction (WMD) to American adversaries that the U.S. should employ a more aggressive approach in resolving U.S.-Sino security issues.⁹ In The Coming Conflict With China, the two authors argue that China will attempt to dominate the Asian region at the expense of U.S. interests. They note increases in Chinese nationalism and anti-American rhetoric as systemic of a greater Chinese issue to compete economically and militarily with the U.S. in the Asian region.¹⁰ China's increasing efforts to modernize its military forces reflect an intent to dominate the Asian region and they maintain that China is already the largest military power in Asia. It has the world's third largest nuclear power, is modernizing the army, navy and air force, and sustains an increasing defense budget.¹¹ Although characterized by some analysts as "hard-line" and "alarmist," Bernstein and Munro provide a capabilities based assessment of projected Chinese intentions.

Michael D. Swaine offers another variant of Bernstein and Munro's perspective. In Strategic Appraisal, he notes that changes in China's economic and military capabilities will influence the Asian security environment. He points out that China's fast growing economy resulted in an increase in military spending, a growing Chinese interest in the defense of trade routes, and an expansion of Chinese access and influence in the region.¹² Swain also notes the vulnerabilities in Chinese military capabilities. He suggests that a significant change in the Chinese military environment was the emergence of the information dominated battlefield which confirmed the obsolescence of China's military forces.¹³ His work intimates that the inability of

Chinese forces to compete militarily in the region impedes the potential of a U.S. - Sino conflict.

Even Chinese military analysts anticipate continued peace and stability in the region. Ronald N. Montaperto and Hans Binnendijk point out that Chinese military analysts at the Chinese National Defense University perceive a relatively benign security environment in which there will be little chance for a major conflict.¹⁴ Finally, David Shambaugh convincingly endorses the current U.S. engagement policy towards China. He believes that engagement seeks to "...stabilize and deepen a wide range of bilateral relations while further integrating China into the international order and thereby constraining its potentially disruptive behavior."¹⁵ Shambaugh contends that a U.S. policy of containment is counterproductive and could not compel China to cooperate in any endeavor. His argument centers on U.S. misinterpretation of Chinese interests and an American "...missionary complex to transform China..." as impediments to resolving U.S. - Sino problems.¹⁶ Although Shambaugh does not specifically anticipate increased Chinese military aggression in the 21st Century, he also states that the U.S. should not "automatically" acquiesce to Chinese assertions of sovereignty over disputed territories or tolerate Chinese coercion of its neighbors.¹⁷

Conversely, Lonnie Henley, an analyst at the U.S. Army's War College, suggests that within the next fifty years, China wants to become an economic, diplomatic and military equal of the world's leading powers. He notes that the current Chinese leadership has assumed that the U.S. perceives China as a threat, that the U.S. will seek to contain China, and that a conflict against the U.S. is possible.¹⁸ Michael

Pillsbury supports Henley's perceptions. He finds other indicators of China's more inimical focus in a recently publicized Chinese military research program which recommends future military capabilities required to defeat the United States by exploiting technology and fighting asymmetrically.¹⁹

Proponents of containment or engagement generally agree on three issues. First, China's economic and military capabilities are growing sufficiently to warrant concern. Next, American strategic and economic interests in the Asia will increase in the 21st Century. Lastly, China's growing military power provide it with increasing capabilities to project power and influence regional and global issues. Clearly, China's modernizing forces will challenge the military balance of power in the region. In maintaining peace and stability in the region, both containment and engagement advocates want to maintain an American military presence in Asia that is more powerful and effective than the Chinese military and prevent China from expanding its own nuclear force and proliferating WMD.^{20 21}

The US remains politically, economically and militarily engaged in Asia.²² American commitments will not decrease in the foreseeable future. The national strategy towards China has often fluctuated between containment, engagement or a combination of both. A common component in both strategies is the maintenance of a military balance which requires a strong US military presence in the region to promote peace and stability. As China's more capable military serves its ambitions to become the greatest power in Asia, the potential for US - Sino conflicts grows.

China's army, air force and navy are collectively known as The People's Liberation Army (PLA). Excluding nuclear capable units and missions, the Army currently has 2.2 million soldiers organized into seven Military Regions. The regions support 24 integrated Army Groups consisting of 78 infantry divisions, ten armor divisions, and five artillery divisions.²³

Beginning in 1975, China began modernizing the PLA to support changing security priorities. China's goal remains to transform the PLA from a defensively oriented, predominantly light infantry force into the preeminent Asian military organization before 2050.²⁴ The most notable characteristics of the modernization effort are the purchases of new equipment, the export of conventional weapons and incidents of Chinese military aggressiveness.²⁵ These modernization characteristics could demonstrate an improved warfighting capability including effective combined arms operations, joint operations and force projection. Unfortunately, it remains relatively conventional to assess the extent of the PLA's modernization by merely extrapolating data from weapons purchases and system capabilities. Restrictions within Chinese society prohibit objective verification and analysis. Subsequently, any estimate of the PLA's emerging capabilities should also consider additional military characteristics such as doctrine, training and organization in conjunction with systems purchases.

A current US analytical focus is on China's improving power projection capabilities. Relative military capabilities generate the most speculation on China's foreign policy. Power projection capability clearly applies to China's security

environment and such issues as Taiwan, the Spratly Islands, India, Vietnam, the Mischief Islands and Japan.²⁶ However, an assessment of power projection capabilities assumes that a joint operations capability exists and concurrently suggests that an effective combined arms capability also exists. For the Chinese Army, combined arms capabilities form the cornerstone of efforts to support both land based power projection and joint operations. Additionally, combined arms warfare is an essential characteristic of a modern, 21st Century fighting force. Any measure of China's military effectiveness warrants an assessment of its combined arms capabilities.

This monograph provides an assessment of the PLA's modernization efforts to improve its combined arms capabilities. The U.S. Army's FM 100-5, Operations, outlines criterion for combined arms operations: simultaneous application of combat, support and service support; integrated components horizontally at each command echelon and vertically between echelons; and fully integrated operations conducted in the dimensions of time, space and resources. Combined arms warfare produces greater combat effects than the uncoordinated application of individual combat arms. It requires detailed planning and violent execution by highly trained soldiers and units who have been thoroughly rehearsed.²⁷

Using the 1979 Sino - Vietnamese conflict as a combined arms capability benchmark, this assessment examines the subsequent changes in the PLA's military doctrine, force structure (equipment), training and leader development programs through 1996. Section 1 provides a synopsis of the Sino - Vietnamese conflict, establish the combined arms shortfalls and deficiencies and identify the PLA's long

range modernization plan. It also outlines the two doctrinal changes which superseded Mao's original doctrine of protracted warfare. Section 2 identifies organizational and major equipment changes which have enhanced the PLA's combined arms capabilities. Section 3 addresses the PLA's efforts to conduct combined arms training including training for field grade officers and field exercises. Section 4 summarizes the PLA's relative progress in combined arms capabilities and its impact on force projection operations and correlated regional security issues.

The Asian security environment is evolving and the U.S. will continue to examine China's motives and intentions. The Korean Peninsula, Taiwan and the U.S. - Japanese security arrangement are three examples of potential U.S. - Sino conflicts. China is a dominant economic power and perhaps deserves to be the great regional power in Asia. As China's economic influence grows, the PLA will justifiably play an increasing role in protecting China's economic interests.

Containment and engagement theorists concur that the U.S. military presence in Asia should remain. Objectively, any successful application of engagement will indirectly support the premise of containment. A U.S. regional security objective to maintain a military balance is complicated by the modernization and increasing capabilities of the PLA. The PLA must master combined arms warfare before it can provide support to joint or force projection operations. This monograph assess the PLA's progress in improving its combined arms operations in order to provide additional perspectives of China's overall military capabilities.

Chapter 1

The 1979 Sino - Vietnamese Conflict

By 1972, the Soviet Union posed the greatest external conventional and nuclear threat to China. After the U.S. - Vietnamese War ended in 1975, China's security strategy emphasized maintaining a mutually beneficial relationship with the U.S. to help contain and prevent Soviet influence from growing in South-east Asia. A departure from the previous Sino - Soviet alignment, these new security issues required the PLA to prepare not only for mechanized operations along the Sino - Soviet border, but also for limited offensive operations designed to project Chinese military power against Soviet client states in Asia. Despite the two divergent requirements in PLA combat capabilities, the Chinese remained doctrinally, organizationally and tactically a predominantly light infantry based army firmly committed to Mao's precepts of protracted war.²⁸

Mao's famous three stage strategy for protracted war is inherently defensive and exploits China's geographical size and immense manpower resources. The strategy takes advantage of the enemy's operational pauses created by extended LOCs and guerrilla warfare and then shifts to the counter offensive after sufficient attrition of enemy forces.²⁹ Even though the Soviet Army could conduct decisive mechanized operations using combined arms capabilities and emphasizing maneuver and firepower, the PLA believed that their wartime experiences against the Japanese, Nationalists and

United Nations forces validated Mao's theories and maintained a continued reliance on light infantry tactics and doctrine.

Although Mao's doctrine did not specifically address combat operations outside of China, the PLA had measurable success conducting external operations against United Nations forces during the Korean War and against India in 1962. It is probable that the PLA entered the 1979 Sino - Vietnamese conflict with little modification to their battle tested doctrine even though they faced a combat experienced Vietnamese Army that was equipped and supported by the Soviet Union. The PLA should have dominated the conflict. They were experienced, organized, trained and equipped to fight a light infantry war. They easily assembled twenty divisions for the conflict and limited their tactical and operational objectives in both time and space. An analysis of the conflict indicates that the China did not decisively defeat the Vietnamese and reflected an inability to conduct effective combined arms operations. This inability compounded China's challenges in fighting a conventional war against the Soviet Union and served as a catalyst for change in the PLA. Although the conflict was short in duration and restrictive in scope, it presented the PLA with concrete examples of tactical deficiencies.

The 1979 Sino - Vietnamese conflict occurred because of historical, ideological and economic issues. A long standing animosity existed between the two nations.³⁰ Common security interests and ideological similarities prompted China to provide military support and economic aid for Vietnam's wars against both France and the U.S. China began reducing military support to Vietnam after the U.S.- Vietnamese

war ended. Following its 1975 reunification, Vietnam began an economic ‘collectivization’ campaign prohibiting capitalistic activities and appropriating private property primarily from wealthy Chinese Vietnamese. In 1978, Vietnam began expelling 200,000 ethnic Chinese because of emerging Sino - Vietnamese differences regarding Kampuchea. This resulted in a mass exodus of refugees into China and increased the number of border incidents.³¹ Sino - Vietnamese territorial disputes over land boundaries, the Gulf of Tonkin and the South China Sea Islands also contributed to the conflict. Even though China occupied the Parcel Islands in 1974 and Vietnam seized six of the Spratly Islands in 1975, each country continued to claim sovereignty over both archipelagos.³² Naval incidents between the two nations increased.

By early 1978, China’s most pressing regional issue was to control Vietnam’s military dominance in Indochina without eliciting a military response from the Soviet Union. In 1978, Vietnam had begun to exert sufficient influence over Laos to isolate Pol Pot and then prepared to overthrow his regime in Kampuchea. In July, 1978, China terminated military and economic aid to Vietnam and increased military support to Pol Pot. Vietnam subsequently signed an economic and military treaty with the Soviet Union in November 1978 and invaded Kampuchea in December. Vietnam replaced the Chinese backed Pol Pot regime and began a counterinsurgency campaign against surviving Kampuchea guerrillas. P.J. Bennett, in Defence Force Journal, comments that this Vietnamese victory “...challenged China’s standing as a leader amongst communist nations and its ability to protect a client state.”³³

Additionally, the Chinese viewed the Vietnamese - Soviet arrangement as a mechanism for continued Vietnamese regional hegemony.³⁴ Paul H.B. Goodwin, writing in China And The World, indicates that China did not invade Vietnam because of a territorial or boundary dispute. Vietnamese expansion reflected Soviet influence in Indochina and threatened China's own image as a military power. China believed it had to demonstrate that Soviet influence and threats of military intervention could not intimidate or influence employment of the PLA. "As with India in 1962, there was no strategic requirement to defeat Hanoi, therefore a limited punitive expedition was all that was required to demonstrate China's willingness to use force."³⁵ The Chinese, however, consistently provided their strongest justification for the punitive invasion as an attempt to resolve the border dispute and to punish the Vietnamese for violations of "...Chinese territorial integrity and sovereignty."³⁶ Chinese concerns with Soviet reaction to the invasion of Vietnam continued to form the core political limitations of the conflict.

Specific political constraints clearly appear in the PLA's military strategy prior to the beginning of the conflict. China limited the conflict to thirty days, prohibited military forces from penetrating more than fifty kilometers in depth, identified military objectives as key urban areas within the Vietnamese border area and restricted air operations to close air support. These military limitations served to prevent the escalation of hostilities, neutralize Soviet interference and reinforce China's justification of imposing singularly punitive actions against the Vietnamese.

Nevertheless, the constraints compounded the PLA's challenge to execute a quick, decisive victory over the combat experienced and Soviet supported Vietnamese forces.

The PLA attacked Vietnam on February 17, 1978 at twenty-nine separate points along the entire 450 mile Vietnamese border. Operationally, the PLA massed between 200,000 and 300,000 men, around 1200 tanks and armored personnel carriers and over 700 aircraft in the Yunnan and Kwangsi Military Districts.³⁷ P.J. Bennett analyzed the conflict as a campaign with three phases. Phase one began with a massive artillery barrage on a broad front that developed into five axis of attack. The two main efforts, predominantly dismounted infantry supported by light armor and heavy artillery, were at Long Son in the northeast and Lao Cai in the northwest. Lao Cai, located in the Red River Valley, and Long Son, located near "Friendship Pass," are both provincial capitals and provide rail and road network access to Hanoi.³⁸ These two cities also control the major Vietnamese trading routes into China. The supporting attacks were against Ha Giang, Cao Bang and Highway 4 in the northeast and against Mong Cai and Highway 1 in the northeastern coastal plains. By February 22, the PLA had penetrated more than ten kilometers inside of Vietnam and seized or destroyed Lao Cai, Dang Dong, Ha Giang, Cao Bang and Mong Cai. Phase one ended with an operational pause in PLA offensive operations, consolidation of control over captured border territories, and resupply operations.³⁹

In Phase two, the PLA reconsolidated their forces for a final attack against Long Son. Colonel J.J. Haggerly, at the U.S. Army Command And General Staff College, believed that the PLA's advance stopped because of logistical problems resupplying

artillery units. He noted that the PLA fought a predominantly light infantry war and relied heavily on massive artillery barrages in order to maintain the momentum of attack.⁴⁰ Vietnam took advantage of the operational pause to conduct two weak counterattacks into Chinese territory. Neither effort proved decisive or conclusive. By the end of Phase Two , the PLA had reinforced its total strength in the Yunnan and Kwangsi Military Districts to about 600,000 of which 200,000 were inside Vietnam.⁴¹

Phase three began on February 23, when the PLA began concentrating approximately three divisions in the vicinity of Long Son. The Vietnamese reinforced Long Son with 10,000 additional regular infantry forces and an unknown number of artillery units by February 26. The battle for Long Son began on February 28 with an artillery barrage by both sides and ended when the PLA captured the city on March 2. Long Son was the decisive battle of the war and is the best example of demonstrated PLA combined arms capabilities. PLA tactics were characterized as "...infantry tactics with fighting on narrow fronts to seize limited objectives and to support infantry assaults with very heavy artillery preparatory fire."⁴² Time generically described the PLA assault as a three pronged envelopment of Long Son which became untenable because of heavy Vietnamese artillery fire⁴³ Russell Spurr, an observer for Far Eastern Economic Review , indicates that the PLA convincingly yet conventionally captured Long Son by isolating the town itself "..with a two pronged drive around the outskirts and finally drove the Vietnamese off the commanding heights."⁴⁴ Bennett's synopsis points out that the PLA used heavy artillery barrages to suppress Vietnamese defenses

in both the town and in the surrounding mountains and assaulted the city with 30,000 troops moving on three axis of attack.

Vietnamese resistance concentrated initially in Long Son but then withdrew into the surrounding hills as the PLA advanced. Harlan W. Jencks, a Research Fellow at the Center For Chinese Studies at the University of California at Berkley, writes that the PLA used armor and infantry assaults against key Vietnamese positions in highgrounds north of Long Son followed by regimental size envelopments of the city itself. The PLA then concurrently conducted urban combat operations in Long Son and suppressed Vietnamese artillery positions in the surrounding highgrounds. The capture of Hill 413, a Vietnamese battle position southwest of the city, on 5 March established the PLA's complete control of Long Son.⁴⁵ Shortly after accomplishing that military objective, China announced the withdrawal of PLA forces.⁴⁶ The PLA completed the withdrawal by March 15 which met the original thirty day political limitation.

An assessment of the PLA's performance provides ambiguous results. Both China and Vietnam claimed military victory. From the Chinese perspective, the PLA achieved all of its military objectives within specified time and political limits. The PLA defeated the veteran Vietnamese Army in operations encompassing both mountainous and urban terrain. The PLA did not commit the bulk of its army into the conflict, yet units from ten of the eleven military districts in China participated in the campaign and gained valuable combat experience.⁴⁷ Alternatively, the conflict did not provide the PLA with a decisive victory despite its numerical superiority, predominant

light infantry structure and relative expertise in light infantry operations. The PLA did not achieve operational surprise and appear to have suffered heavy casualties.

Casualty figures vary widely and are probably inflated. Western news agencies, citing varying official estimates, report that Hanoi claimed that the PLA suffered 45,000 casualties and lost 273 tanks and armored personnel carriers (APCs) as well as hundreds of artillery pieces and mortars.⁴⁸ China's official estimates claim 10,000 Vietnamese casualties and one thousand enemy prisoners of war.⁴⁹ Bennett, using additional open sources, reports that Vietnam caused over 60,000 PLA casualties and destroyed over 280 tanks and APCs. He cites Chinese sources which claimed that the PLA inflicted over 50,000 Vietnamese casualties while suffering over 20,000 casualties.⁵⁰ Jencks generally concurs with those figures but strongly suggests that the official casualty statistics remain too contradictory for anything but tentative estimates. He does support, however, the Vietnamese claim of destroying up to one hundred PLA tanks in the first days of the conflict.⁵¹ Casualty figures alone are not representative of tactical success or failure. Moreover, the PLA uses a twenty five percent casualty planning figure for all of its operations and it is probable that they expected almost 20,000 combat casualties. However, given that the conflict lasted only sixteen days, was limited in scope and predominantly a light infantry operation, PLA losses appear extremely high.⁵²

The PLA experienced difficulties in conducting combined arms operations. The PLA did not successfully employ air support throughout the campaign despite having a ten to one aircraft superiority and more than 1000 airplanes in the combatant military

districts. During Phase one, the Chinese Air Force (PLAAF) attacked strategic targets to disrupt Vietnam's defensive plans. This occurred at the expense of providing close air support to the PLA. Despite its numerical superiority and the complete lack of Vietnamese opposition, the PLAAF flew only 500 sorties in six days. During Phase two, the PLAAF did not interdict Vietnamese reinforcements moving towards Loa Cai or Long Son. There is no evidence that the PLAAF played a significant role in detecting or stopping the two Vietnamese counterattacks that occurred during this phase. In the attack on Long Son, the PLAAF apparently conducted close air support against emplaced Vietnamese artillery positions, but the air commitment was not extensive and results are not available.⁵³ Bennett states that the PLAAF could not provide effective air support at all times because of the PLAAF's technological obsolescence and because of poor communications capabilities between ground and air forces. Haggerly also confirms the lack of PLAAF air support for ground operations, but he implies that the PLA could not apply air support effectively because of terrain and weather limitations.⁵⁴

The PLAAF should have played a more prominent role in the conflict. The PLAAF could have easily targeted Vietnamese rail, road, urban infrastructure, and fixed defensive positions to support offensive operations. Of equal importance were Vietnamese long range artillery especially at Lao Cai and Long Son. The PLAAF faced no opposition from the Vietnamese Air Force with the exception of limited mobile air defense elements that were also restricted by the terrain. Undoubtedly, political limitations impeded the PLAAF's combat support role. More importantly, the

PLAAF had never before provided the PLA with close air support. The Sino - Vietnam conflict established the requirements for an important PLA to PLAAF combined arms link.

Based upon the limited military objectives and the maneuver restricted terrain, the conflict was fought principally by light infantry forces. The PLA concentrated armor forces in both main effort sectors (Loa Cai and Long Son) where terrain was restrictive but amenable to limited maneuver. The PLA did not use armor on the open coastal plains near Mong Cai probably because it represented a supporting effort. Overall, the PLA's armor forces were ineffective. Arguably, the limited military objectives precluded any requirement for deep armor strikes. In an all out campaign to defeat Vietnam, PLA armor forces would have probably attempted to strike through Lao Cai, Long Son and Mong Cai on established road networks to envelop forward defenses and seize Hanoi.⁵⁵

Terrain was another impediment to armor operations. Alan J. Singler, an analyst with the U.S. Army Intelligence and Threat Analysis Center, observed that the terrain generally prevented the massing of armor and favored enemy anti-tank defenses. Vietnamese anti-tank ambushes, effectively employed at choke points and in restrictive terrain, supplied with Soviet Sagger and RPG-7 anti-tank weapons exacerbated the technological inferiority of PLA armor.⁵⁶ However, PLA infantry divisions suffered from organizational shortfalls and ineffective combined arms tactics which further compounded their armor vulnerability. Armor regiments were integral components of PLA infantry divisions, but PLA infantry divisions were not mechanized. There were

fewer than 14 APCs in a standard 14,000 man infantry division.⁵⁷ The PLA's light infantry could not maneuver with armor elements or provide effective anti-armor suppression support. Moreover, the PLA towed the majority of its artillery including rocket launchers, field guns and howitzers. As a result, armor elements quickly advanced beyond the range of effective artillery support. Examples of PLA combined arms operations in the conflict are perhaps best characterized by operations in which armor elements merely provided artillery and ambulatory support.⁵⁸

The PLA fought the Sino - Vietnamese conflict as a light infantry war. Air power, probably the most promising Chinese capability, proved ineffective because of untested ground support combat procedures, communications shortfalls and the technological obsolescence of PLAAF aircraft. Armor elements performed poorly. Poor terrain, mechanized disparities, and the lack of effective air support impeded armor and combined arms operations. The PLA, therefore, fought the war using light infantry tactics similar to the ones developed and perfected during the Korean War.⁵⁹ Despite this "regression," some analysts concluded that the PLA's performance was rather effective. Russell Spurr found that the PLA performed adequately. In spite of communications shortfalls, there was nothing to suggest that the PLA had reason to be disappointed with their military performance. During the entire conflict, the PLA made no attempt to widen the scope of the war by attacking deeper into Vietnam despite penetrating Vietnamese forward defenses. "The apparently pedestrian attack under cover of mass artillery was designed to seize the minimum territory at maximum expense to the defenders."⁶⁰ Haggerly also recognized the PLA's light infantry tactical

effectiveness. "Chinese tactics were to launch, with heavy artillery support, vicious attacks for limited objectives and reorganize and consolidate by making detailed preparations for the next offensive.⁶¹ Contrary to other sources, Spurr and Haggerly did not see the PLA engage in ineffective "human wave attacks." Rather, the PLA infiltrated by small assault units up to battalion level to envelop and bypass Vietnamese defensive positions in order to attack lines of communications and seize key terrain.⁶²

There were many lessons for the PLA to learn from the conflict. From the Clausewitzian perspective of war as an extension of politics, the PLA proved again capable of achieving assigned strategic goals. Tenets of Maoist doctrine remained valid for waging limited wars against similarly equipped but numerically weaker enemies. Units from almost every military district gained valuable combat experience. Light infantry and engineer units performed well and there were some improvements in coordinating artillery fires. The conflict provided the PLA with the first opportunity in almost twenty years (1962 Sino - Indian Border Conflict) to evaluate its capabilities.

The PLA discovered several issues directly related to its combat performance during the conflict. Foremost, it was incapable of waging modern, mobile warfare with its current organization, equipment and doctrine. It was therefore ill prepared to successfully defend China's national interests in a conventional war against the Soviet Union. Concurrently, China was also incapable of decisively projecting military power to satisfy regional concerns. The limited war into Vietnam, with its terrain and fifty kilometer advance restrictions, proved that the PLA's best developed tactics of bypassing and enveloping enemy positions no longer proved effective. The PLA

needed to dramatically improve coordinating close air support, providing sufficient and effective logistical support, controlling armor, infantry and artillery operations and improving communications. Modernization, although focused on command, control and communication, masked equally important organizational, training, and doctrinal requirements.

China's leaders realized that improving the PLA was more than just an equipment modernizaton issue. Based upon fundamental requirements of modern warfare including combined arms operations, effective command and control, and robust supply capabilities, the PLA began to question the validity of Maoist doctrine and the overall ability of the PLA to defend national security interests. In conjunction with a national effort started in 1978 to modernize the economy, the PLA began the long overdue review to modernize its doctrine, structure, equipment and training.

Chapter 2

Doctrinal Evolution

Military theory provides a blueprint for the conduct of future wars. It anticipates changes, describes processes and explains phenomena that lead to the destruction, disorganization and disintegration of armies in battle. Military doctrine is the practical application of military theory by real world armies characterized by a unique force structure, operational missions, weapons and political constraints. Successful armies require the capability to adjust doctrine if quantitative and qualitative differences exist between theory and the execution of war.⁶³ Doctrine is the overarching structure for the development of tactics, techniques and procedures that lead to the destruction of enemy forces in battle. It determines organizational structure, weapons procurement, modernization strategies and guidelines for the conduct of war.⁶⁴

From its official inception in 1946, the PLA's military doctrine principally reflected the defensive and protracted tenets of Mao Tse tung. Of the various concepts that he developed between 1935 and 1949, his concept of protracted war emphasized leveraging the capabilities of the entire population to compensate for a technologically superior enemy. The development and coordinated use of guerrillas, militia and regular armed forces demonstrated Mao's unique strategic military skills and political control of population resources.

Protracted war was the cornerstone of the PLA's "People's War" doctrine and provided the best deterrence against a large scale invasion. Despite the PLA's inevitable evolution from protracted war concepts and doctrine, Mao's influence will

continue as long as the PLA remains technologically and militarily inferior to China's perceived security threats. This chapter outlines the PLA's doctrinal evolution from "People's War" in 1949 to the current "Local War Under High Technology Conditions." The two major evolution are "People's War Under Modern Conditions" in 1979 and "Local War" in 1985. PLA doctrine theoretically evolved based upon future threat perceptions. Evidence suggests, however, that the PLA's doctrine insufficiently bridged the quantitative and qualitative differences between theory and the execution of war.

Attempts to apply protracted war concepts in support of Chinese strategic interests after 1949 proved less than valid. Mao's military thought reflected the exigencies of a unique, drawn out Chinese Civil War and an insurrection against an entrenched, over extended Japanese occupation force more than an effective national effort that secured national sovereignty. Furthermore, the People's War doctrine was defensive in nature and exploited the mobilized population and physical characteristics of the Chinese interior. Mao developed his military theories while in combat and specifically tailored his perspectives towards the effective use of human resources engaged in guerrilla and light infantry operations. Mao validated his "People's War" with undeniable battlefield successes. His doctrine, however, had little application outside of the low intensity conflict environment where it originated. It is inadequate when applied to limited offensive operations outside of China unless the combat environment facilitates the application of the "human factor."

Giri Deshingkar, writing in China Report, provides two perspectives on this issue. In the Korean War and Sino-Indian border dispute (1962), the PLA did not fight a protracted war of attrition despite being thoroughly indoctrinated with the people's war doctrine. Particularly in the Korean War, to which the PLA brought almost twenty years of continuous combat experience, the Chinese fought as a regular standing army on wide fronts and could not apply Mao's three strategic phases of protracted war. The only successful application of the "People's War" doctrine after 1949 occurred during the U.S. - Vietnamese War.⁶⁵

Ellis Joffe, a Chinese Army expert at the Hebrew University of Jerusalem, also uses the Korean War to identify the limitations of Maoist doctrine. The PLA entered the war expecting to overcome their technical inferiority in weapons and equipment with Maoist tactical and organizational principles. These methods proved ineffective and the PLA suffered severe casualties against superior United Nations firepower and equipment.⁶⁶ Subsequently, the PLA used the Korean War as the basis for a major modernization effort and China began receiving military aid from the Soviet Union by late 1951. Professor Joffe observes that modernization effort abruptly failed in the late 1950's because of political, security and economical circumstances.⁶⁷

Harlan W. Jencks also attributes the failure of the PLA's first modernization effort to Mao's perceived political mistrust of the PLA officer corps and the compounding effects of modernization and Soviet influence.⁶⁸ Purges, reaffirmation of the political origins and responsibilities of the PLA, and reduction of Soviet military aid effectively crippled most modernization efforts by 1958. Additionally, the existing

and growing nuclear capabilities of the U.S. and the Soviets compelled Mao to develop nuclear weapons rather than modernize the conventional capabilities of the PLA. All of these factors affected the PLA's ability to overcome its combat related deficiencies.

The establishment of a credible nuclear force was the first challenge to the primacy of Mao's protracted war doctrine. If nuclear weapons failed, an invader would still have to cope with a completely mobilized society fighting a protracted war of attrition. "People's War" continued to function as the principal deterrent. The nuclear umbrella created a slight paradox because it established the boundaries of the PLA's conflict continuum. It provided China with a nuclear option and a "People's War" capability, but no alternative conventional solution. The lack of consistent and substantial equipment modernization relegated the PLA as the weaker opponent in any conventional combined arms conflict with either the U.S. or the Soviet Union. China could either use nuclear weapons or resort to the "human factor." Essentially, nuclear capabilities reinforced the merits of fighting a defensive people's war and ignored the technological and modernization shortfalls uncovered during the Korean War.

The PLA's doctrine, equipment, organization and warfighting capabilities stagnated for more than twenty years. Additionally, efforts to insure the PLA's political reliability impeded the development of warfighting skills. The PLA played significant roles during successive political crisis from 1965 until Mao's death in 1976.⁶⁹ Unsurprisingly, the PLA entered the Vietnam Conflict with the same Maoist doctrine, tactics and equipment capabilities that it had during the Korean War. The

emphasis on light infantry operations, lack of close air support and uncoordinated combined arms operations during the Sino - Vietnamese conflict validated the principle that unless doctrine accurately reflects a future war environment, armies "...end up fighting the last war."⁷⁰

In January 1975, China began a national modernization program designed to improve agricultural, technical, industrial and military capabilities. Military modernization's remained the last priority principally because the Chinese economy was incapable of financially supporting it. The government expected the PLA to reduce its expenditures in favor of the other three modernization sectors. Gordon Jacobs, writing in Jane's Intelligence Review, correctly suggests that the Chinese were unable to produce real military modernization without a strong economic base.⁷¹ Consequently, the PLA's defense budget continuously declined from about 6.6 percent in 1976 to about 5 percent in 1991.⁷² S.K. Gosh, an observer with China Report, writes that by 1979, the PLA was forced by monetary constraints to adopt a selective modernization process initially focused on improving air defense, anti tank and communications capabilities.⁷³ These initial priorities reflected the PLA's "economy class" approach towards modernization and focus on alleviating PLA deficiencies in armor and aircraft support. The PLA eventually reverse engineered obsolete, man portable Soviet air defense and anti tank weapons to meet their requirements. These low cost incremental solutions to complex mechanization problems will distinguish Chinese modernization efforts for the next fifteen years.

By 1979, a new doctrine of “People’s War Under Modern Conditions” provided the underpinnings for the PLA’s modernization program. This doctrine retained the original premise that China’s major external threat consisted of a Soviet invasion of North-eastern China but recognized the increasing importance of China’s growing industrial and urban areas. “People’s War Under Modern Conditions” radically shifted the PLA’s defensive effort from a protracted, infantry based war of attrition conducted deep within China’s interior to a forward, positional defense which emphasized the quick, decisive destruction of Soviet forces through combined arms operations. The major shift reflected two broad assumptions. First, China’s nuclear deterrent made the prospect of a complete Soviet subjugation of China remote. The PLA now expected the Soviets to either conduct punitive operations or attempt to seize China’s industrial and manufacturing resources in North-east China.⁷⁴ Second, the Sino - Vietnamese conflict demonstrated a requirement for military forces capable of conducting quick, limited wars fought on or outside of China’s periphery. Soviet encroachment did not necessarily create the conditions for a deep penetration into China’s interior which obviated a central prerequisite of a “People’s War.” Both issues prompted a reevaluation of the applicability of a people’s war.

Officially promoted as an adaptation of Mao’s original thoughts to emerging conditions, some analysts interpret the new doctrine as the first genuine recognition of the shortcomings of a “People’s War.” June Teufel Dryer, in The China Quarterly, characterizes the new doctrine by postional warfare (forward defense), modern weaponry and combined arms capabilities.⁷⁵ Nan Li, another contributor to The China

Quarterly, found three additional revelations in the new doctrine. First, the new doctrine advocated quick, decisive victories very early in the conflict. This was a departure from Mao's cornerstone tenet of protracted war. Next, a forward defense in depth sought to decisively engage the attacker early on and offered the best alternative for protecting China's growing urban and industrial areas.

The defense in depth did not rule out using mobile forces to attack the enemy's LOCs, but the PLA now had a combined arms requirement to counterattack and destroy enemy penetrations. Even so, the concept departed from Maoist doctrine of maintaining a fluid battlefield and not defending urban areas. China's nuclear arsenal replaced the notion of a "People's War" as the primary strategic deterrent.⁷⁶ Paul Goodwin, citing an article by the commandant of the PLA's Academy of Military Sciences, provides additional clarification of the new doctrine. Reliance on the traditional people's war or infantry based defense was insufficient. The PLA needed to develop combined arms forces and tactics and procure modern weapons, equipment and logistics in order to decisively defeat the enemy. Maoist doctrine of a protracted people's war retained its validity only in situations where China faced an enemy capable of subjugating the entire country.⁷⁷

Harlan W. Jencks provides clear analysis of the major shortfall of implementing the new doctrine. He argues that a "People's War Under Modern Conditions" is an applicable strategy if the PLA can conduct modern combined arms operations that decisively defeat conventional Soviet forces. The failure or inability to effectively conduct conventional operations prevents the PLA from destroying Soviet forces close

to the border, sacrifices almost half of China's industrial base and compels the PLA to again rely on a costly, prolonged war of attrition.⁷⁸ Until the PLA was fully capable of conventional, combined arms operations, China had little recourse in preventing limited Soviet incursions short of threatening nuclear war. Provided that the Soviets did not attempt to subjugate China, the original precepts of Mao's protracted, manpower based, war of attrition had increasingly less application. Similarly, China was unprepared to successfully conduct operations, limited or in conjunction with a large scale campaign, beyond China's borders. The new doctrine not only represents the recognition of new security situations and requirements, but also a wholesale departure from Mao's original thought. By 1984, however, the PLA remained incapable of executing a "People's War Under Modern Conditions." As Paul Goodwin notes, by the early 1980's, the PLA remained best prepared to fight the least probable war.⁷⁹

The next major change in PLA doctrine originated with a new threat assessment that discounted the probability of all major conflicts. In 1985, the Chinese Military Commission estimated that China would not face a major war in the next fifteen years or longer and that small scale wars would become more frequent. This assessment rested principally on the nuclear and conventional balance between the U.S. and the Soviets which provided relative global stability. The reduction of the Soviet threat created additional resources and time to professionally modernize the PLA. Interestingly, the assessment had an opposite effect. China used the newly forecasted period of peace and stability to slow down modernization efforts and to decrease the

PLA's budget.⁸⁰ A cumulative adverse effect was that the PLA had not completed its transition towards a "People's War Under Modern Conditions" capability before imposition of the new doctrinal requirements. "Local War" doctrine reduced ground force modernization and mechanization requirements. Quick, limited small scale wars required rapid force projection capabilities as opposed to medium to high intensity wars characterized by combined arms operations. Less than six years after the debut of "People's War Under Modern Conditions," the PLA's modernization priorities abruptly changed. "Local War" doctrine mainly encompassed only a small portion of the ground forces. Because of a limited capabilities to project those forces, the PLA inevitably chose to remain oriented on the mechanization capabilities to support combined arms operations.

There were long term implications of the contrasting priorities. Military modernization slowed because there was no immediate threat and it remained the last priority of the national modernization program. The PLA had to be reorganized in order to effectively conduct operations within an expanded continuum of conflict. This demanded greater organizational flexibility and capability which conflicted with the anticipated effect of a diminishing threat perception. By the mid 1980's, the PLA was essentially organizing to support three different doctrines with the traditional "People's War" edition best supported by the force structure. Consistently, China did not adequately fund modernization requirements. The lack of funding justified a reduction in force and placed renewed emphasis on PLA business ventures and arms exports.⁸¹ As a result, efforts to improve combined arms capabilities and to effectively

implement doctrinal changes remained handicapped by unresourced technological requirements.⁸²

Inevitably, “Local war” doctrine continued to evolve. By 1989, local wars consisted of regional, bilateral or unilateral operations in theaters limited by depth and political objectives.⁸³ Nan Li notes three characteristics of the new doctrine. First, there is an emphasis on decisively employing “elite” forces capable of joint, combined and independent operations. Coupled with employing elite forces is the principle of preemptive strikes to gain the initiative. Another concept is to concentrate forces and firepower in the war zone to rapidly defeat the enemy and achieve quick victories.⁸⁴ Several analysts indicate that the 1991 Gulf War served to confirm for the Chinese the efficacy of the PLA’s new doctrine.⁸⁵ It was a local, conventional war limited in scope and political objective. Small, well trained forces using modern technology and combined arms operations decisively executed and rapidly achieved military and political objectives. Coalition forces, using advanced weapons conducted preemptive, in depth strikes to gain and maintain the initiative destroyed. Finally, the victors leveraged technology on an unprecedented scale to mass firepower and forces within the theater.

Alternatively, the Gulf War fully accentuated the PLA’s capability shortfalls due to the absence of modern, technologically enhanced equipment. The Iraqi Army, largely equipped and similarly organized like the PLA, suffered a humiliating defeat despite its combat experience and numerical superiority. For the PLA, the Gulf War epitomized a modern, high technology war. Subsequently, the PLA doctrinal emphasis

became “local war under high-technology conditions by 1992.” More importantly, the PLA’s defense budget began increasing in 1989 and has sustained successive growth through 1995.⁸⁶

China’s development of the “local war” doctrine marks a major shift from “People’s War Under Modern Conditions” and remains the current definitive doctrine. It is a radical departure from the monochromatic view of a preventing a Soviet invasion and recognizes that the PLA can not be a major military power until it can conduct operations at all levels of war. “Local War” doctrine provides a plan for “...arms development and deployment, force structure and military training...”⁸⁷ That perspective provides explicit links to the PLA’s modernization efforts, reorganization and training emphasis.

The single greatest criticism of the PLA’s modernization was the government’s inability or unwillingness to finance new requirements demanded by changing doctrine. The PLA reconciles new doctrinal issues by not transitioning from the previous ones. As a result, the PLA prepares for all three doctrinal environments without excelling at any. By default, force structure provides limited capabilities to satisfy the various requirements of a protracted “People’s War” of attrition, a quick, decisive conventional combined arms mid size war on China’s periphery and force projection operations to win “Local Wars.” Despite doctrinal changes and inconsistent modernization efforts, the PLA has consistently attempted to improve its combined arms capabilities. Chapter Three examines the organizational changes that facilitated this effort.

Chapter 3

Organizational Reforms

Doctrine is a compelling mechanism for organizational reforms. Since 1979, PLA ground forces experienced two doctrinal changes that precipitated fundamental organizational reforms. Inextricably linked to the doctrine of ‘People’s War Under Modern Conditions,’⁸⁸ the 1985 Military Council Meeting ordered sweeping reorganizations within the PLA. These changes primarily focused on reorganization of PLA corps into “Group Armies” and a reduction in force of up to one million soldiers.

⁸⁸ Concurrently, the PLA selectively modernized components of its ground forces and maintained a focus on combined arms training. The second major organizational reform occurred with the adaptation of the “Local Wars Under High Technology Conditions” doctrine which emphasized rapid deployment forces. By 1991, each military region had established “quick reaction force” components and figuratively satisfied the portions of the new doctrinal requirements. PLA force projection capabilities generate much of the current debate on China’s military effectiveness. However, the PLA’s ability to match force capabilities with doctrinal requirements remains suspect because of previous difficulties implementing major doctrinal, organizational and equipment changes. An examination of these changes since 1979 illustrates the cumulative affects of the PLA’s failed modernization programs.

In 1979, the PLA’s ground forces were equipped and trained to fight and win a “People’s War.” The army numbered approximately 3,625,000 consisting of main,

regional and local (militia) force appropriately organized to support Mao's protracted war concepts. There were 121 light infantry divisions in the main forces organized into thirty eight corps. Each corps, triangular in structure, contained three infantry divisions, one artillery regiment, one anti aircraft artillery regiment and support units.⁸⁹ The standard infantry division had three infantry regiments, one armor regiment and two towed artillery battalions. Additionally, there were eleven armored divisions, three airborne and forty artillery divisions.⁹⁰ Fifty-five divisions deployed within North and North-East China and thirty-two deployed within East and South-East China. The predominant disposition of units in the northern military regions reflected Chinese estimates of a Soviet threat.

At face value, the PLA appeared fairly formidable. Three million soldiers organized into infantry and armor combat units provided a strong defensive deterrent. In order to develop the capabilities to support the precepts of a "People's War," the PLA sacrificed conventional combined arms capabilities. The PLA remained tethered to Maoist protracted war doctrine and the overwhelming light infantry characteristics of its force. Seventy percent of the ground forces were light infantry divisions. Each division had only fourteen armored personnel carriers and towed artillery, anti-tank and anti-aircraft artillery units.⁹¹ Another degradation of the PLA's combined arms potential resulted from divergent command and control processes. Armor and artillery divisions, although attached to main force infantry corps, had distinct and separate training, support and command hierarchies which precluded effective combined arms doctrine development and training.⁹²

The paucity and diversity of equipment impeded standardization and resulted in a mixture of capabilities across the army. China used captured weapons from the U.S., Japan, Australia, Germany, and Czechoslovakia to “..fill gaps in PLA capabilities when the military lacked the resources to develop or acquire modern weaponry.”⁹³ By 1980, however, China had an indigenous capability to produce variants of tanks, armored personnel carriers and artillery based upon Soviet equipment given to the PLA in the mid 1950s.⁹⁴ While not modern, this equipment served as the backbone of the PLA and was conscientiously provided to main force units in the Shenyang and Beijing military districts (north eastern). Despite the apparent prioritization of equipment to “front line units,” the lack of standardization continued. Tank regiments in main force infantry divisions, for example, have a variety of equipment “...since some are equipped with ancient Soviet T-34/85 tanks, or with the Chinese Type-62 light tank , while still other regiments have a mixture of tanks and self-propelled guns.”⁹⁵ Of the entire 175 division force, the fourteen separate armored divisions offered the best opportunity for combined arms operations only because the organic infantry regiment was mechanized and some of the artillery was self propelled.⁹⁶

The PLA’s organizational structure in 1979 effectively supported the “People’s War” doctrine. The PLA was predominantly a light infantry force characterized by simple and employable equipment. The majority of their equipment was of Soviet origin and reverse engineered but the PLA also used captured equipment as necessary. Although reliable and reasonably effective, the equipment was technologically obsolete before it was fielded. Declining defense funding impeded all modernization programs

and prevented the PLA from systematically equipping the force. This contributed to mechanization shortfalls and a lack of equipment standardization throughout the force. The resultant diverging capabilities, even among main force front line units, marked the inefficiency of the PLA's combined arms capabilities as a whole. The PLA had little choice but to continue to leverage the "human factor" to overcome deficiencies in mechanization, armor, and self propelled artillery. Subsequently, the PLA found the rapid transition towards the new doctrine of "People's War Under Modern Conditions" difficult to achieve.

The 1985 Central Military Commission ordered two major reorganizations in conjunction with adaptation of the new doctrine. First, consolidation programs reduced the eleven Military Regions to seven and brought together all branches of the ground forces into "Group Armies."⁹⁷ The 118 infantry, eleven armor and forty artillery divisions were combined into twenty four group armies. Probably modeled on the Soviet combined arms army model, the creation of group armies streamlined command and control and facilitated combined arms training. Group Armies integrated the independent or separate armor and artillery forces and obviated the previous autonomous command and control hierarchies.⁹⁸ The other major reorganization program was a reduction of military strength by one million men. Gene D. Tracey, an analyst with Asian Defence Journal, indicated that it took the PLA almost three years to complete the reduction in force.⁹⁹ Other analysts allow for a slightly higher number and indicate that further reductions continued until 1995 with an approximate endstrength of 2 million.¹⁰⁰

The principle effect of the PLA's reorganization was to reduce the size of the force. Main force infantry divisions decreased from 118 to less than eighty. Independent armor and artillery units were also reduced, but the PLA maintained its eleven armor divisions. An immediate benefit of the force reduction was a significant decrease in armor and armored personnel carrier (APC) requirements.¹⁰¹ However, after completion of the Group Army reorganization, a rough application of the PLA's 1986 armor and APC inventories implies that the PLA could have only fully fielded less than a third of its total force with significant variants and discrepancies in equipment and capability.¹⁰² A PLA review of the reorganization effort is less generous and indicates that "...that motorised troops now comprised one-tenth of the Army's total strength. This includes several thousand trucks and armoured personnel carriers distributed among several hundred thousand troops."¹⁰³ Alternatively, the PLA required only sufficient mechanization to effectively meet the forward defense requirements of the "People's War Under Modern Conditions" doctrine. The PLA completed the reorganization to Group Armies by 1986, the first reduction in force by 1989, and had officially fielded one fully mechanized infantry division by 1990.¹⁰⁴ The PLA, now theoretically organized to fight a mechanized war, began to focus on combined arms training.

As early as 1986, changing Chinese security perceptions began endorsing the likelihood of regionally based local wars instead of a superpower confrontation. The concept of local war did not necessitate major changes within the organizational structure of the PLA's ground forces, but the new doctrine levied new requirements

for special purpose forces. In June 1988, the PLA announced the formation of the 15th Airborne Army as a rapid reaction force. This event illuminated a change in the PLA's modernization emphasis which now sought to create the capability to rapidly and decisively win limited local wars. A facet of the new capability was the creation of "fist" units or special purpose forces.¹⁰⁵

The PLA first organized "fist" units, also known as quick strike battalions, in 1984. Located in each Military Region, these units provide support to rapid deployment forces originating from that region. Additionally, each Group Army has at least one organic quick strike battalion although not every Group Army has a rapid deployment mission. All "fist" units have common support missions which range from direct attacks and disruption of enemy command and control nodes to targeting for deep strike operations and conducting unconventional warfare.¹⁰⁶ Special purpose forces are specifically designed to achieve rapid and decisive victory in a limited war close to China's borders. "Fist" are better trained and equipped than the majority of the PLA's ground forces and the size of rapid deployment forces increased to more than 200,000 by 1995. PLA abilities to project rapid reaction and "fist" forces continue to increase and these forces pose a credible threat.¹⁰⁷

Reorganization alone will not accommodate new doctrine. The establishment of Group Armies and subsequent emphasis on combined arms operations created modernization and mechanization requirements that were difficult to fulfill. The transition towards mechanization was selective and incomplete. The mixture of obsolete foreign equipment with indigenously produced Chinese copies of obsolete

foreign equipment created a lack of standardization which impeded the development of combined arms capabilities. Given a choice, the PLA correctly upgraded some front line armor and infantry units designated to defeat a Soviet attack in the northern Chinese regions. To their credit, the PLA improved existing equipment to prevent becoming completely obsolete.¹⁰⁸ These efforts produced equipment sufficiently competitive to allow the PLA to become a major arms exporter and sell more than 3700 tanks and 2200 APCs during the 1980s.¹⁰⁹

China had a proven capability to modernize its ground forces, but the PLA remained the lowest modernization priority. As a result, new equipment was not sufficiently integrated into the PLA because of the economic primacy of the export market. The selected units which were upgraded represented less than one-third of the force and created a force with diverging capabilities. Units in the northern regions were categorically superior to units in the other regions. Coupled with the army wide emphasis on combined arms training, the overall effectiveness of the PLA declined as under equipped units could not realistically meet the new doctrinal requirements. It remains plausible that the latest emphasis on local war has also impeded the modernization and standardization of PLA ground forces. Despite consistent increases in the PLA's defense budget since 1990, the Air Force and Navy received the bulk of the funding to improve air and naval support to rapid deployment forces.¹¹⁰

Organizationally, the PLA made positive steps to improve itself. It established combined arms infrastructures to meet mechanized requirements stipulated by "People's War Under Modern Conditions." The PLA reduced personnel and units by

more than twenty-five percent in less than three years. Despite a lack of funding and modern equipment, the army succeeded in upgrading selected front line units. This limited modernization resulted in divergent capabilities and a lack of standardization throughout the army. The PLA was unable to fully transition from light infantry to mechanized forces. As a result, the bulk of the army remained characterized by the "People's War" doctrine, organization and equipment. Less than twenty percent of the ground forces were capable of implementing "People's War Under Modern Conditions." "Local War" doctrine further complicated the PLA's modernization priorities and imposed additional equipment, organizational and training requirements. Portions of the PLA developed while overall combined arms capabilities stagnated. By the mid 1990's, the PLA was a force with three doctrines, a hollow combined arms organizational concept and obsolete equipment. Despite sporadic and inefficient modernization results, the PLA continued to emphasize and improve its overall combined arms training through educational and training reforms.

Chapter 4

Foundations Of Professionalism

Doctrinal evolution precipitates changes in organizational and equipment capabilities. Doctrine also establishes the conditions required to develop tactics, techniques and procedures (TTPs) necessary to achieve military proficiency. Training is the primary mechanism for practicing TTPs and achieving and sustaining military proficiency in peacetime. Training assessments provide critical information on unit and individual capabilities. During the last six years, the PLA has dramatically increased the number of large scale combined arms and joint exercises. Independent observers can not monitor these exercises, so it is difficult to evaluate the PLA's effectiveness.¹¹¹ An alternative method for measuring the PLA's training effectiveness is to illustrate improvements in military education. Two primary evaluation conditions are levels of training standardization and the synthesis of military education and training.

Since 1979, the PLA has struggled to effectively implement the two doctrinal departures from Mao's concepts of a "People's War." Integration of the "People's War Under Modern Conditions" doctrine achieved inadequate modernization of less than twenty percent of the total force and endorsed a variety of obsolete equipment. The PLA's inability to fully implement "modern conditions" simply reinforced the primacy of the previous doctrine. Consequently, the PLA found itself forced to achieve military proficiency to support mechanized warfare while concurrently sustaining proficiency in conducting a "People's War." The advent of "Local War"

further complicated the PLA's predicament. with requirements to sustain proficiency in two doctrinal concepts and achieve proficiency with a third. This was a difficult if not impossible endeavor for any army. The PLA's principle strategy for arresting the growing doctrinal, organizational and capabilities dilemmas centered on military educational reforms and a combined arms training focus.

As early as 1981, the Chinese leadership began emphasizing improving the quality of leadership in the PLA and considered it the most critical component of military modernization.¹¹² The principle initiative to improve the officer corps centered on reforming military education. These reforms included increasing the number of military academies and changing core curriculum to reflect the requirements of modern warfare. The PLA had already established a three tier military education program in the 1950s.¹¹³ Decades of internal political strife, compounded by the requirement of insuring the PLA's political reliability, resulted in the termination or destruction of many military academies. There were 140 military educational facilities at the beginning of the Cultural Revolution in 1967 and only forty by 1976.¹¹⁴ After Mao's death, Deng Xiaoping reestablished the military education system as a critical component of military modernization.

By 1984, the PLA had more than one hundred command and specialized technical schools.¹¹⁵ Two initiatives warranted the increase in educational facilities. In 1983, the PLA stipulated that all active duty officers were required to have graduated from a military academy. The majority of the officer corps had no formal military training. Unable to accommodate sending all officers to school full time, the PLA

established evening schools within the Group Armies and Military Regions to qualify individuals. The initial goal was to qualify at least seventy percent of the officers by 1985. Officers who did not meet the new standards were demoted or retired.¹¹⁶ In 1984, graduation from a military academy became a prerequisite for commissioning. Previously, a military education was not required and the principle prerequisite was that “..officers had to come through the ranks.”¹¹⁷ Under this program selected soldiers received non-standard military training in each military region. These two educational mandates increased the demand for more schools and provided the impetus for educational standardization.

The PLA’s command training program has three levels. The junior level is the equivalent of a college education with initial military training. Similar to American public and private military academies, the schools train officers to serve as platoon leaders. The intermediate level in the educational system trains battalion and regimental executive officers to become regimental commanders, political officers and staff officers at the regimental and division levels.¹¹⁸ The senior level trains commanders and staff officers for duty at army level or higher. Students study strategy, command and control of campaigns, combined and joint operations.¹¹⁹ The National Defence University (NDU) is unique as the sole senior level training institution that also functions with an open door policy.¹²⁰

The greatest course curriculum reforms occurred at the NDU. The reforms improved training in strategy and tactics required for modern warfare and reduced political indoctrination and education.¹²¹ The senior level curriculum offers

concentration in command, large scale training and military theory. The command studies program specializes in military affairs, politics and science and technology. Military affairs training is the central format for examining combined arms training and emphasizes theory, current PLA doctrine and military history. A key program within military affairs combines PLA operational characteristics with historical study of contemporary operations.¹²² This stage exposes the PLA's leadership to the essential technological and doctrinal realities required for a modern army. This synthesis plays a critical role in helping the PLA estimate doctrinal validity and provides a rationale for modernization efforts. Operations Desert Shield / Desert Storm serves as the current basis of comparison.¹²³

Reformation of the PLA's military education system significantly improved the professionalism and effectiveness of the officer corps. Mandating professional military education as a prerequisite for commissioning established a common base of military professionalism. In a remarkable effort to eradicate the endemic lack of military education within the active force, the PLA trained more than one million officers at the various academies by 1986.¹²⁴ The revived military education system standardized training, exposed the entire officer corps to doctrinal concepts, and served as a mechanism to examine and prioritize modernization and training issues.

It is difficult to define aggregate benefits associated with this education modernization effort. The PLA found it necessary to provide seventy percent of the active duty officer corps with formal military education in order to achieve minimum

competence standards. This implied that prior to 1983, the majority of the officer corps was untrained and incapable of functioning within minimal professional standards required by a “People’s War.” Arguably, that doctrine required different professional standards than a “modern war,” but the absence of a systemic military educational consciousness degraded PLA combat capabilities and effectiveness.

In lieu of large scale equipment acquisitions and upgrades, the PLA attempted to leverage educational factors against modernization shortfalls. The majority of ground forces remained under equipped with obsolete equipment, and classroom theory proved difficult to transpose to an actual training environment. Until the PLA is fully modernized and capable of conducting modern warfare, a military education will not transcend the army’s Maoist capabilities. Closely related is the PLA’s penchant for studying and extracting concepts from the latest contemporary conflict.¹²⁵ It is extremely challenging to train the officer corps on employment concepts for high technology weapons if those systems or capabilities do not exist in the PLA’s current or anticipated inventories. Subsequently, the PLA has routinely endorsed unproved and superficial asymmetrical concepts to remedy the expansive and growing capabilities shortfalls between the PLA and modern armies.¹²⁶

The educational system emphasized the mechanical development of historical, theoretical or political solutions for military problems and not the development of operational art. Instructors spend their entire careers teaching and are not representative of actual command, staff or training environments. Tactical problems have approved “school” solutions justified by appropriate political thought.

Cumulatively, the PLA's educational efforts fall short of providing the army with an officer corps capable of developing and leading a modern, 21st Century fighting force.

Despite economic, political and technological impediments, the PLA's military educational program has enabled the improvement of the army's combined arms capabilities. Combined arms operations require a common base of tactics and processes which a professional military education partially fulfills. Another component necessary for achieving combined arms proficiency is an effective training program. PLA unit training programs operate on a ten month cycle and reflect the basic influence of a conscription army. The cycle begins with individual and small unit training and culminates with major divisional and corps exercises.¹²⁷ Enlisted soldiers serve for three years which results in a thirty percent personnel turnover every year. Enlisted personnel are generally lacking in technical and mechanical skills so the training focus is on individual tasks at the regimental level.¹²⁸

By the mid 1980s, Group Armies, "People's War Under Modern Conditions," and tactics based upon historical precedence and contemporary requirements created the conditions for more robust combined arms training. The PLA emphasized combined arms training from squad to corps level, but had no relative combat experience to effectively measure against or compare it with.¹²⁹ The PLA's educational system provided historical and academic solutions as the experience base and the U.S. Army's combined arms experiences and doctrine contributed to the effort.¹³⁰ The first large scale combined arms exercise occurred in 1981. In 1994, the PLA conducted fifteen Group Army combined arms exercises.¹³¹ The most significant

feature of these latest operations was the inclusion of an “opposing forces (OPFOR)” element. The PLA had established some OPFOR training elements by 1991, but directed several Military Regions to provide or increase their OPFOR up to division size in 1995.¹³²

Concurrently, the PLA standardized training tasks by 1990, although it continued to face several training constraints. Long standing political concerns about the PLA’s loyalty continued to degrade training. Ideological considerations took precedence over military training and readiness. Only overall precepts of Mao’s “people’s war” and the requirements of a “forward defense” could justify doctrinal or training developments.¹³³ The defense budget has consistently increased since 1990, but military modernization remained the last national priority. Finally, the educational level of the “peasant” based conscripted army remains low. The average soldier does not have the basic technological skills required to meet the demands of a modern fighting force. Despite the recent educational reforms to professionalize the officer corps, the army is ill-prepared to define and construct a training environment required to prepare for a modern conflict.

The PLA has made progress in educational and training reforms. The overall effectiveness of the officer corps and the army’s combined arms capabilities has increased. These two reforms, although critical, are not sufficient to raise the PLA to the level of a modern fighting force. Standardization in education and training are simplistic low cost solutions to a complex problem. Commitment to reform within educational and training components also reaffirms the leveraging of additional

“human factors” against the gross failures of the overall military modernization program. Short of a war, it remains difficult to accurately assess the effectiveness of the PLA’s peacetime training efforts and educational reforms. The PLA’s reliance on politically motivated people over the high technology conditions of modern warfare continue to sidestep the realities of the future.

The PLA is nurturing an officer corps more capable of rapidly modernizing the force given adequate funding and political commitment. That same officer corps will also more readily discern the army’s technological and modernization deficiencies and be less likely to accept ideological dogma as prudent solutions. All nations strive to keep the overall costs of maintaining a modern army as low as possible. Few nations write an ideological check for a modernization bill and fewer armies, cognizant of growing inadequacies, accept it.

Conclusion

The PLA has made significant improvements in its military capabilities since the 1979. They officially departed from the venerable "People's War" doctrine to a force projection emphasis oriented on small, limited wars on China's periphery. To support evolving doctrinal concepts and changing security requirements, the PLA reorganized into Group Armies, established Rapid Reaction Units and reduced the force by more than one and one-half million personnel. Deng Xiaoping initiated reforms in the PLA's military education system which helped create a more modern and professional officer corps. Closely related to educational improvements were improvements in unit training including increased combined arms emphasis and development of Opposing Forces (OPFOR). Unequivocally, the PLA is smaller, better trained and more lethal force today than Chinese forces that fought in the Sino - Vietnamese Conflict.

China has prospered in the post Cold War security environment and sustained an economical growth rate of ten to twelve percent per year. Regional peace and stability remain necessary factors for continued economic improvement. A benign security environment allows the Chinese leadership to keep the PLA as the last national modernization priority and directs more resources into China's economy. Force modernization still occurs, earnestly supported by the former Soviets, and centers on rapid reaction units and force projection capabilities. It is still cheaper to finance selected units and capabilities than the entire force. Modernization of the total force is a long term goal, but can only occur after sufficient improvements in China's economic capacity. As the PLA continues to modernize, it is likely that the Chinese

leadership will increasingly leverage military capabilities to achieve external and internal political goals.

The PLA has the potential of becoming the pre-eminent military power in Asia, but impediments remain. The PLA has unbalanced force capabilities. The bulk of the ground forces remain capable of fighting the least probable war. Mechanized forces constitute less than twenty percent of total ground forces and suffer from obsolete equipment and technological shortfalls. Force projection capabilities rely primarily on airborne forces and can't satisfy all situations within the small war conflict continuum. The PLA's modernization programs result in the development of situational capabilities instead of improving the combat effectiveness of the aggregate force.

China remains an enigma with a political system inimical to democracy, unclear economical goals, a xenophobic perspective of security relationships and increasing but fragmented military capabilities. PLA Lieutenant General Li Jijun, speaking at the U.S. Army War College in 1997, best exemplifies the contradictions and complexities of Chinese perspectives. After extolling the historical relevance of Chinese military thought, the defensive nature of the PLA's strategy and aspects of Chinese nationalism, General Li Jijun suggests that the U.S. and China have many common interests. He advocates improving and strengthening ties between the two countries and bluntly warns "If you treat China as an enemy, you will have 1.2 billion enemies with which to contend. The price for that will be very high."¹³⁴

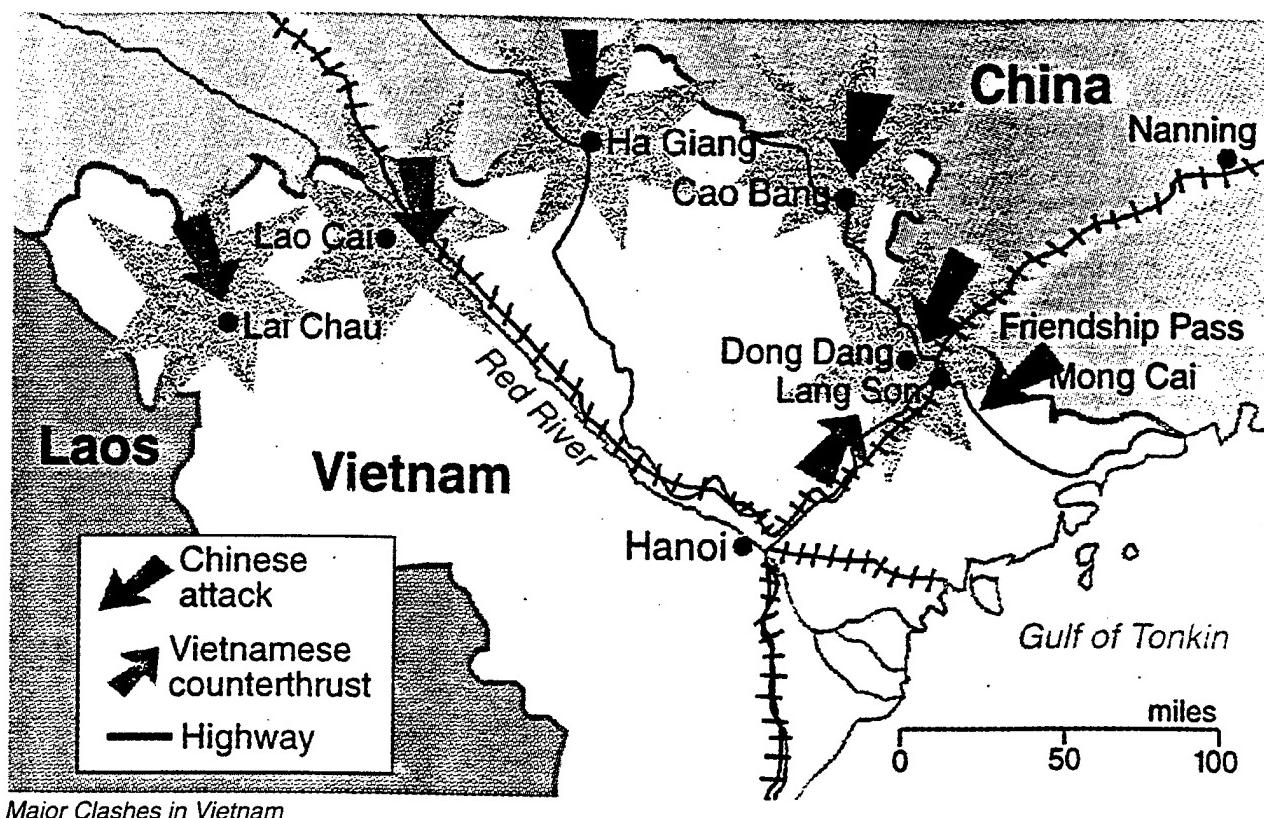
Speculation on future Chinese political, military and economic intentions pushes China experts into either containment or engagement positions. Growing Chinese

influence will necessitate modifications of U.S security relationships in the Asian region. U.S. efforts to deal with the PLA's increasing military capabilities focuses on engagement at all levels and will probably increase.¹³⁵

The PLA is far from achieving the capabilities of a modern military despite selective facets of excellence. There is no doubt that China intends to have a modern, multifaceted and combined arms capable force. Until this occurs, the PLA "...will pose a potential threat only to those opponents they can march, drive or rail to and subsequently overwhelm with numbers."¹³⁶ The PLA will enter the 21st Century looking more like the limited, technologically poor and professionally challenged army of 1979 than representative of a seventeen year modernization effort.

Appendix I. Map of PLA main and supporting efforts during the 1979 Sino - Vietnamese Conflict

Source: How They Fight : Armies of the World. National Ground Intelligence Center (Asia). June 1995, 7.



Appendix II. Table of Organization And Equipment of 1979 PLA infantry division.

Source: How They Fight : Armies of the World . National Ground Intelligence Center (Asia). June 1995, p.8.

Personnel and Major Equipment—Infantry Division

Personnel/Equipment	Total Inf Div	Hq Inf Div	Hq Co	Recon Co	Engr Bn	Sig Bn	AAA Bn	CW Co	FT Co	Gd Co	Tank Regt	Arty Regt	Three Inf Regts (Total)
Officers	1,403	133	7	10	40	48	52	10	9	9	182	150	753
Enlisted Personnel	11,961	493	63	125	491	270	463	90	75	96	1,112	985	7,698
Total Personnel	13,364	626	70	135	531	318	515	100	84	105	1,294	1,135	8,451
7.62mm LMG	339			9	27					6			297
7.62mm HMG	54												54
12.7mm HMG	18												18
40mm (RPG)	516+	48		X	X					X			468
57/75/82mm Recoilless Rifle	54												54
60mm Mortar	54												54
82mm Mortar	81												
120/160mm Mortar	12											12	
85mm Field Gun	18											18	
122mm Howitzer	12												
130mm Rocket Launcher	18												
14.5mm AAHMG	12						12						
37/57mm AA Gun	18						18						
Tank, Medium	80										80		
APC	14										14		
ARV	5										5		
Truck, Cargo*	373+	67	12		15+	3	60				29	97	90
Motorcycle w/Sidecar	44+			9	4	X		5			12	5	9
CW Equipment, various	X				X			X			X		X
Flamethrower	27								27				
Radio, Manpack/Portable	405			8	5	21	21				18	70	252

X = Amount of equipment not available

* Includes 6 Ambulances

ENDNOTES

¹ "The Global Security Environment," 1996 Department Of Defense Quadrennial Review, Washington, DC, pp. 3-4.

² "Asia: A More Assertive China," Strategic Survey 1996/97, The International Institute For Strategic Studies (London: Oxford University Press, 1997): 162-3. In 1996, China had foreign currency reserves of \$105 billion, a Consumer Price Index of 8.3% and an average economic growth of 10% since 1978.

³ "A National Security Strategy For A New Century," Pamphlet, The White House, 21 May 1997, pp.ii, 1.

⁴ The U.S. has arrangements with Japan, Republic of Korea, Republic of China, Australia, New Zealand

⁵ See "Greater China," The China Quarterly, no. 136 (Dec 1993) for a focused study of China's potential in the post Cold War.

⁶ Recurring issues are human rights violations, the non-proliferation of Weapons of Mass Destruction, access to Chinese markets, and Chinese membership in the World Trade Organization

⁷ Andrew J. Nathan and Robert S. Ross, The Great Wall And The Empty Fortress (New York: W.W. Norton & Company, Inc., 1997), 16.

⁸ "From Red Hope back to Yellow Peril?" Jeffrey Wasserstrom, Times Literary Supplement, June 27, 1997, p8.

⁹ Richard Bernstein and Ross H. Munro, The Coming Conflict With China (New York: Alfred A. Knopf, 1997), 78-9.

¹⁰ Ibid., 46-7,49.

¹¹ Ibid., 65.

¹² Michael D. Swaine, "China," Rand Reprints from Strategic Appraisal (Santa Monica; RAND, 1996), 194.

¹³ Ibid. 194. The Chinese were astute observers of the 1991 Gulf War. U.S. high tech weaponry and other military capabilities quickly defeated a very large Soviet and Chinese equipped Iraqi force.

¹⁴ Hans Binnendijk and Ronald N. Montaperto, "PLA Views on Asia Pacific Security in the 21st Century," Strategic Forum, National Defense University, no. 114 (Jun 1997): p2. Also see Ronald N. Montaperto, "China as a Military Power," Strategic Forum, National Defense University, Paper No. 56 (Dec 1995) for an additional perspective on China's efforts to avoid regional conflict.

¹⁵ David Shambaugh, "The United States and China: Cooperation or Confrontation?", Current History, Vol.96, No.611 (Sep 1997): p244.

¹⁶ Ibid., 245.

¹⁷ Ibid., 245

¹⁸ Lonnie Henley, "China's Capacity For Achieving A Revolution In Military Affairs," Strategic Studies Institute, U.S. Army War College, p43.

¹⁹ Michael Pillsbury, "Chinese Views Of Future Warfare: Implications For The Intelligence Community," in Prepared Testimony Before The Senate Intelligence Committee, Washington, D.C. , 18 Sep 1997.

²⁰ Bernstein and Munro, The Coming Conflict With China, 218-9.

²¹ Benjamin Schwarz, "The Paper Tiger Theory," New York Times Book Review, June 29,1997, p29. His review and comparison of Nathan and Ross to Bernstein and Munro illustrate the contradictions in maintaining the regional balance of power.

²² See A National Security Strategy, pp. 14,19,24;

²³ "China And North East Asia," Jane's Sentinel: The Unfair Advantage (1996): p. 23.

²⁴Valentin Shishlevskiy, "China's Defence Policy: Redefining Security Interests & Rewriting Military Doctrines," Asian Defence Journal (Feb 1995): p. 31

²⁵Bernstein and Munro, The Coming Conflict With China, p78-9. Within the last ten years, the Chinese military sank three Vietnamese ships, strengthened its garrisons in the Spratly Islands, aggressively challenged a US naval task force off the coast of North Korea, seized the Mischief Islands and used military exercises to both intimidate Taiwan and restrict maritime traffic in the Taiwan Strait

²⁶ China claims territorial rights to Taiwan, the Spratly Islands and the Mischief Islands. China fought a border dispute with India in 1962 and fought Vietnam for a variety of reasons (mistreatment of ethnic Chinese, Vietnam's invasion of Cambodia) in 1962. China's security environment is characterized by historic claims to territory and punitive invasions of limited duration and objective. A force projection capability will shift the military balance in the region.

²⁷ Field Manual 100-5, Operations, 14 Jun 1993: p.2-3.

²⁸ See Handbook on the Chinese Armed Forces (Washington, D.C.:DIA, July 1976), p.1-1 thru 1-5.

²⁹ Mao Tse-Tung, "On Protracted War," Selected Military Writings Of Mao Tse-Tung, CSI Reprint (1991), p210-11.

³⁰ Herbert S. Yee, "The Sino - Vietnamese Border War: China's Motives, Calculations and Strategies," China Report , vol. 16, no.1 (Jan - Feb 1980): p15. China ruled Vietnam until the French colonized most of Indochina in the 17th Century.

³¹ See Keesing's Contemporary Archives, vol. 25 (1979): pp. 29869 - 29874 for more information on the border dispute. Vietnam claimed 583 Chinese armed encroachments in 1978 and 230 more in Jan - Feb 1979. China claimed that Vietnamese forces had intruded into China more than 50 times between Jan 15 and Feb 7 and more than 30 times between Feb 8 and Feb 12.

³² See Chang Pao - min, "Sino - Vietnamese Territorial Dispute," Asia Pacific Quarterly (Spring, 1985): 74-87 for a historical context of the territorial claims. Pao - min also illustrates the possible oil and gas potential of the islands.

³³ P.J. Bennett, "The Sino-Viet Conflict - A Synopsis," Asian Defence Journal , no.18 (Sep - Oct 1979): 38

³⁴ Bruce D. Larkin, "China and Asia: The Year of the China - Vietnam War," Current History, vol. 77, no.449 (Sep 79): p55.

³⁵ Paul H.B. Goodwin, "Soldiers and Statesmen In Conflict: Chinese Defense and Foreign Policies in the 1980s," China And The World: Foreign Policy in the Post Mao Era, ed. Samuel S.Kim (Boulder: Westview Press, 1985), p212.

³⁶ See Melinda Liu, "Sitting at the back of the class," Far Eastern Economic Review, 2 March 1979, p.13 and Keesings Contemporary Archives, vol.25 (1979): p29871.

³⁷ P.J. Bennett, Asian Defence Journal, p39. Figures on strength vary for both combatants. See Time, 12 March 1979, p34; Far Eastern Economic Review, 2 March 1979, p. 10-11; U.S. News and World Report, 12 March 1979, p. 28 for a variety of troop strengths.

³⁸ Most of the border incidents occurred near Friendship Pass. The ethnic Chinese refugees also used that border crossing during their exodus.

³⁹ P.J. Bennett, Defence Force Journal, p.40.

⁴⁰ J.J. Haggerly, "The Chinese Vietnamese Border War," The Army Quarterly and Defence Journal, vol.109, no.3 (Jul 79), 267.

⁴¹ Keesing's Contemporary Archives, vol. 25 (1979): p29871. This is the highest estimate and probably includes support troops.

⁴² Haggerly, The Army Quarterly, p267.

⁴³ Time, 12 March 1979, p. 34

⁴⁴ Russell Spurr, "Studying end of term reports," Far Eastern Economic Review, 16 March 1979, p13.

⁴⁵ Harlan W. Jencks, "China's 'Punitive' War On Vietnam: A Military Assessment," Asian Survey, vol.19, no.8 (August 1979): p811.

⁴⁶ Bennett, Defence Force Journal, p41.

⁴⁷ Jencks, Asian Survey, p.807

⁴⁸ Time, 19 March 1979, p.46.

⁴⁹ "Windup of a No-Win War," Time, 19 March 1979, p.46. Also see "China-Vietnam Peace - Just a Facade," U.S. News & World Report, 19 March 1979, p.28 for slightly higher losses. See also Keesing's Contemporary Archives, vol. 25 (1979): p29874 for Vietnamese claims of 62,500 Chinese casualties, 280 tanks and APCs destroyed and 115 artillery pieces destroyed. PLA losses remained constant.

⁵⁰ Bennett, "Defence Force Journal", p.42. See also Keesing's, p.29874.

⁵¹ Jencks, Asian Survey, p..812. His estimates combine both sides and result in at least 30,000 dead and more than 75,000 casualties (including civilians).

⁵² Curt Bartholomew, "China's People's Liberation Army: Basic Doctrine and Infantry Tactics," How They Fight: Armies Of The World, US Army Intelligence and Threat Analysis Center Pamphlet, Asia, April 1993, p19.

⁵³ Bennett, Defence Force Journal, 41.

⁵⁴ Haggerly, The Army Quarterly, p.268

⁵⁵ During the conflict, the Vietnamese established strong mechanized and reserve armor forces in blocking positions north of Hanoi and on Route 6 (towards Lao Cai) and Hwy 1 (towards Long Son).

⁵⁶ Alan J. Singler, "The People's Liberation Army in Vietnam and Changes in PLA Military Doctrine," How They Fight: Armies of the World, U.S. Army Intelligence Center and Threat Analysis Center Pamphlet, Asia, vol.10, p.10

⁵⁷ Ibid., p8.

⁵⁸ Ibid., p10.

⁵⁹ For another excellent review, see Anthony Farrar-Hockley, "A Reminiscence of the Chinese People's Volunteers in the Korean War," The China Quarterly, Brian Hook, ed., no. 98 (June 1984): p287-304.

⁶⁰ Russell Spurr, Far Eastern Economic Review, 16 March 1979, p13.

⁶¹ Haggerly, The Army Quarterly, p.268.

⁶² Ibid., p271.

⁶³ James M. Schneider, "The Eye of Minerva: The Origin, Nature and Purpose of Military Theory and Doctrine," Theoretical Paper No. 5, U.S. Army Command And General Staff College, 1986, p.15-6.

⁶⁴ Ellis Joffe, The Chinese Army After Mao (Cambridge: Harvard University Press, 1987), p93.

⁶⁵ Giri Deshigkar, "Mao Zedong's Military Thought: A Perspective," China Report 31, no.1 (Sage Publications; New Delhi, Thousand Oaks, London), 1995, p104-5.

⁶⁶ Joffe, p72.

⁶⁷ Ibid., p72-4.

⁶⁸ Harlan W. Jencks, From Muskets to Missiles: Politics and Professionalism in the Chinese Army, 1945 - 1981, (Boulder: Westview Press, 1982), p.46-53. Jencks provides details of the political infighting including purges and adherence to the egalitarian properties of Maoist doctrine.

⁶⁹ Ibid., Ch.4. Jencks provides excellent accounts of PLA roles in the Great Proletarian Cultural Revolution, in suppressing secessionist tendencies in various Military Regions, and in maintaining military control of the country from 1969 - 1973.

⁷⁰ Schneider, Eye of Minerva, p15.

⁷¹ Gordon Jacobs, "The PLA - From Doctrine to Organizations," Jane's Intelligence Review, vol 5, no 8 (August 1993), p373.

⁷² Ibid., 373-4. Chinese defense expenditures remain speculative. Official Chinese expenditures generally reflect about 50% of what western intelligence sources estimate. Additionally, the PLA's Military Industrial Complex provides income to cover military budget shortfalls. PLA business ventures number more than 20,000 and generate up to 15% of the published defense budget. See Tai Ming Cheung, "China's Entrepreneurial Army: The Structure, Activities and Economic Returns of the Military Business Complex," Chinese Military Modernization, C. Dennis Lane, Dimon Liu, Mark Weisenbloom eds. (Washington, D.C.: The Aei Press, 1996), Ch. 8, for details on the pervasive nature and extent of the issue.

⁷³ S.K. Gosh, "China's Military Moderization Programme," China Report, vol. 14, no. 4 (July - August 1978)p.73.

⁷⁴ Harlan W.Jencks, "'People's War Under Modern Conditions': Wishful Thinking, National Suicide, or Effective Deterrent?", The China Quarterly, no.98 (June 1984), p307.

⁷⁵ June Teufel Dryer, " Deng Xiaoping: The Soldier," The China Quarterly, no. 135 (September 1993), p545.

⁷⁶ Nan Li, " The PLA's Evolving Warfighting Doctrine, Strategy and Tactics, 1985-95: A Chinese Perspective," The China Quarterly, no.146 (June 1996), p443.

⁷⁷ Joffe, pp. 80-1.

⁷⁸ Jencks, "People's War Under Modern Conditions," p316.

⁷⁹ Paul H.B. Goodwin, "Soldiers and Statesmen in Conflict: Chinese Defense And Foreign Policies in the 1980s," China and The World, Samuel S.Kim ed. (Boulder: Westview Press, 1984), p.224. Goodwin finds the Sino-Indian and Sino- Vietnamese conflicts good examples of 'coercive diplomacy' and implies that the PLA needs improvements in order to effectively support such operations.

⁸⁰ Ibid., p266. Jencks also notes the decreasing defense budgets from 6% GNP in 1980 to less than 3% GNP in 1986 despite the formal modernization effort and China's improving economy.

⁸¹ Jim Mann, "U.S. Aim: Arms Dealer for the Americas," Los Angeles Times, Wash ed., Oct 8, 1997, p.7 cites Congressional Research Service indicating that from 1993-96, China ranked 6th world wide in both arms exports and imports.

⁸² Paul H.B. Goodwin, "Changing Concepts of Doctrine, Strategy, and Operations in the Chinese People's Liberation Army, 1978-87," The China Quarterly, no.112 (December 1987): p587-9.

⁸³ Gene D.Tracy, "China's New Military Doctrine," Asian Defence Journal, March 1990, p26.

⁸⁴ Nan Li, The China Quarterly, pp.451-2.

⁸⁵ See Michael D. Swain, "China," Rand Reprints from Strategic Appraisal, (Santa Monica: RAND, 1996), p.194 and David Shambaugh, "The Insecurity of Security: The PLA's Doctrine of Threat Perception Toward 2000," Journal of Northeast Asian Studies, vol.13, no.1, Spring 1994, p.3-15 for two additional perspectives of Chinese lessons learned from the Gulf War.

⁸⁶ David Shambaugh, "China's Commander in Chief: Jiang Zemin And The PLA," Chinese Military Modernization, C. Dennis Lane, Dimon Liu, Mark Weisenbloom eds. (Washington, D.C.: The Aei Press,

1996), p.233. Official spending amounts to \$7.51 billion in 1995, reflects a yearly increase since 1989 and sustains double digit rates.

⁸⁷Nan Li, The China Quarterly, p.459.

⁸⁸ Harlan W. Jencks, "Defending China in 1987," Current History, vol. 86, no.521 (September 1987), p.266. He also points out that the previous Military Regions were consolidated from eleven to seven.

⁸⁹ Harlan W. Jencks, From Muskets to Missiles: Politics and Professionalism in the Chinese Army. 1945-1981 (Boulder: Westview Press, 1982), p. 148. See also Harvey W. Nelson, The Chinese Military System: An Organizational Study of the Chinese People's Liberation Army, 2nd ed.(Boulder: Westview Press, 1981), p.115-6 for corroborating discussion.

⁹⁰ "China," The Military Balance 1978 - 1979, The International Institute For Strategic Studies (London: Bartholomew Press, 1978):p. 56.

⁹¹ Alan J. Singler, "The People's Liberation Army in Vietnam and Changes in PLA Military Doctrine," How They Fight: Armies of the World. U.S. Army Intelligence Center and Threat Analysis Center Pamphlet, Asia, vol.10, p.8.

⁹²Jencks, From Muskets to Missiles, p.146. Infantry units were controlled by the General Staff Department, while the Artillery and Armor units were controlled by separate organizations. See also Harvey, The Chinese Military System, p.127 suggesting that centralized control was politically expedient to help maintain regime stability.

⁹³ Wendy Frieman, "Foreign Technology and Chinese Modernization," China's Military Reforms: International and Domestic Implications, Charles D. Lovejoy and Bruce W. Watson, eds. (Boulder: Westview Press, 1986), p. 60. She suggests that foreign equipment acquisition is a consistent feature of conventional weapons production in China since 1949.

⁹⁴ Jane's Armor and Artillery 1979-80, Christopher F. Foss, ed. (New York: Franklin Watts, Inc., 1979), pp. 5-6, 184-188, 321,413-414, 466.

⁹⁵Jencks, From Muskets to Missiles, p.149.

⁹⁶ Ibid., p12.

⁹⁷ Paul H.B. Goodwin, "Changing Concepts of Doctrine, Strategy and Operations in the Chinese People's Liberation Army, 1978-87," The China Quarterly, no.112 (December 1987): p.580.

⁹⁸ Jencks, Defending China in 1987, p.266.

⁹⁹ Gene D. Tracey, "China's New Military Doctrine," Asian Defence Journal, March 1990, p.23. The reductions break down as 60% officers and 40% enlisted men.

¹⁰⁰ Gordon Jacobs, "The PLA-From Doctrine to Organizations," Jane's Intelligence Review, vol.5, no.8 (August 1993): p.375; successive editions from 1979 through 1995 of "The Military Balance," The International Institute For Strategic Studies (London: Oxford University Press), China Section; and Jane's Sentinel: China and North-East Asian , Paul Beaver, ed. (1996), p. 23 for imprecise but consistent indications of ground force reductions.

¹⁰¹ Using rough estimates and standardizing infantry and armor units (3 regts plus 1 armor or inf rgt), APC requirements shrank from 35,400 to 22,500 and armor requirements from 16,800 to 12,600. In 1996 the PLA's APC inventory was approximately 4700 infantry fighting vehicles and 3000 APC's (Jane's Sentinel, p.26) and its armor inventory was approximately 8100. The Military Balance, 1996-97, p179 offers dissimilar figures of approximately 9600 tanks and 4500 APCs. Both estimates indicate that the PLA's APC requirement still remains formidable and neither source fully consider the independent tank and infantry regiments and brigades.

¹⁰² Jane's Armour and Artillery 1996-97, Christopher F. Foss, ed. (1996, 17th ed), pp.5-9, 266-268, 398-400 indicate that the PLA has nine types of main battle tanks, two variants of amphibious tanks, two types of infantry fighting vehicles and eight variants of APCs. Although indicative of the PLA's lucrative arms export markets, the number of different types of vehicles in service complicates logistic support, maintenance, and combat effectiveness.

¹⁰³ Gene D. Tracey, The PLA's New Military Doctrine, p.25-6

¹⁰⁴ "China," The Military Balance 1991-1992, The International Institute For Strategic Studies (London: Brassey's, 1991): p.150

¹⁰⁵ Gordon Jacobs, The PLA, p.375

¹⁰⁶ *Ibid.*, p375,377.

¹⁰⁷ Chong-Pin Lin, "The Power Projection Capabilities Of The People's Liberation Army," Chinese Military Modernization, C. Dennison Lane, Dimon Liu, Mark Weisenbloom, eds. (Washington D.C. : The AEI Press, 1996), p.104

¹⁰⁸ See Jane's Armour and Artillery, 1996-97, for Chinese upgrades to their venerable Type 59 tank and WZ 501 Infantry Fighting Vehicle.

¹⁰⁹ R. Bates Gill, Chinese Arms Transfers: Purposes, Patterns, and Prospects in the New World Order (Westport, CT: Praeger, 1992), Appendix 2, pp212-6. China sold 1640 tanks and 300 APCs to Iran, 1300 tanks and 650 APCs to Iraq, and 1525 tanks and 200 APCs to Pakistan.

¹¹⁰ Chong-Pin Lin, Chinese Military Modernization, Ch.5.

¹¹¹ ¹¹¹ Dennis Blasko, "Better Late Than Never: Non-Equipment Aspects of PLA Ground Force Modernization, Chinese Military Modernization, C. Dennison Lane, Dimon Liu, Mark Weisenbloom eds. (Washington, D.C.: AEI Press, 1996), p.142. Most evaluations come from PLA press reports.

¹¹² Ellis Joffe, The Chinese Army After Mao, (Cambridge: Harvard University Press, 1987), p. 120

¹¹³ Chengzhu Zhu, " An Introduction to the National Defence University of the Chinese People's Liberation Army," Army Quarterly Defence Journal, vol.124 (January 1994),:p.47.

¹¹⁴ Joffe, The Chinese Army After Mao, p.122

¹¹⁵ *Ibid.*, p123.

¹¹⁶ June Teufel Dryer, "The New Officer Corps: Implications for the Future," The China Quarterly, no.146 (June 1996), p319

¹¹⁷ William R. Heaton and Charles D. Lovejoy, Jr., "The Reform of Military Education in China: An Overview," China's Military Reforms: International and Domestic Implications, Charles D. Lovejoy, Jr., Bruce W. Watson, eds. (Boulder: Westview Press, 1986), p.93.

¹¹⁸ Joffe, "The Chinese Army , p.124

¹¹⁹ Ibid., p123-4.

¹²⁰ Chenghu Zhu, Army Quarterly Defence Journal , p.50. Ostensibly, the policy means that the NDU is available to scrutiny from Chinese society and other countries. The U.S National Defense University began formal exchanges in 1988.

¹²¹ June Teufel Dryer, "Deng Xiaopeng: The Soldier," The China Quarterly , no.135 (September 1993): p545. Political reliability of the Army remains a primary concern for China's leadership. Course content reflects increasing or decreasing emphasis.

¹²² William R. Heaton, Jr., "Professional Military Education in China: A Visit to the Military Academy of the People's Liberation Army," The China Quarterly , no.81 (March 1980): p. 124. At that time, the PLA thoroughly studied the Soviet Army in Manchuria in 1945, the Arab - Israeli Wars and the Sino - Vietnam Conflict. Six faculty and staff members from the academy were sent to participate in the Vietnam Conflict in order to provide lessons learned for the curriculum.

¹²³ Nan Li, "The PLA's Warfighting Doctrine, Strategy and Tactics," The China Quarterly , no.146 (June 1996): p. 456 . This not so unique characteristic stimulated much of the current Chinese literature which describes asymmetrical attacks on U.S. centers of gravity illustrated by the Gulf War.

¹²⁴ Heaton and Lovejoy, China's Military Reforms , p.93.

¹²⁵ The PLA seemingly reforms its doctrine based upon contemporary conflicts. The Arab - Israeli War (1972) and the Sino - Vietnamese Conflict precipitated "People's War Under Modern Conditions. The Falklands War (1982), and Desert Storm all impacted on the "Local War Under High Technology Conditions" doctrine. See Heaton, "Professional Military Education in China," p. 125; Nan Li, "The PLA's Warfighting Doctrine, Strategy and Tactics," p.456-8; and

¹²⁶ Michael Pillsbury, "Chinese Views Of Future Warfare: Implications For The Intelligence Community," in Prepared Testimony Before The Senate Intelligence Committee, Washington, D.C. , 18 Sep 97.

¹²⁷ Harvey W. Nelson, The Chinese Military System: An Organizational Study of the Chinese People's Liberation Army , 2nd ed. (Boulder: Westview Press, 1981), p123

¹²⁸ Dennis Blasko, "Better Late Than Never: Non-Equipment Aspects of PLA Ground Force Modernization, Chinese Military Modernization , C.Dennison Lane, Dimon Liu, Mark Weisenbloom eds. (Washington, D.C.: AEI Press, 1996), p. 135 & 137. The majority of PLA soldiers learn to drive after joining the army.

¹²⁹ Harlan W. Jencks, "Defending China in 1982," Current History , vol.81, no. 476 (September 1982): 274.

¹³⁰ Jer Donald Get, What's With The Relationship Between America's Army and China's PLA? , Strategic Studies Institute Pamphlet, U.S Army War College (Carlisle Barracks, 1995), Appendix B lists

the high level Army to Army exchanges that occurred from 1985 -88. It also provides an overview of individual and collective training including combined arms and live fire examples.

¹³¹ Dennis J. Blasko, John F. Corbett, Jr., Philip T. Klapakis, "Training Tomorrow's PLA: A Mixed Bag of Tricks," The China Quarterly, no. 146 (June 1996): Table 1, p.508-12.

¹³² Ibid., p.497-8. Size of OPFOR units begins as low as the squad level and varies in size throughout the Army.

¹³³ Ibid., p.492.

¹³⁴ Li Jijun, Traditional Military Thinking And The Defensive Strategy Of China, Earl H. Tilford, ed., U.S. Army War College Pamphlet, Strategic Studies Institute, Letort Paper No. 1 (Carlisle Barracks, 1997), p.9.

¹³⁵ David Shambaugh, "China's Military: Real or Paper Tiger?," Washington Quarterly vol. (Spring 1996): p.31

¹³⁶ Dennis Blasko, "Better Late Than Never: Non-Equipment Aspects Of PLA Ground Force Modernization," Chinese Military Modernization, C. Dennison Lane, Dimon Liu, Mark Weisenbloom eds. (Washington, D.C.: The AEI Press, 1996), p.142

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